CHAPTER 15

Computer Administration

15. Computer Administration

15.1 Introduction to Control Panel

Control panel is the main tool for configuring the computer system. Most of the tools to configure the system come with the normal installation of Windows. However, others are placed in the Control Panel by other software or hardware installation programs.

In Windows 10, **Settings App** available is substitute for **Control Panel**. But both Control panels as well as Settings App have been kept as there are few configurations which can be done using Control Panel only.

To open settings, Select **Start=>Click on Settings**, following window will appear:

Figure15.1 Settings App Window

Various configuration options in Settings Menu are:

> **System**: Display, notifications, apps, and power options

> **Devices**: Bluetooth, printers, and mouse/keyboard

> **Network & Internet**: Manage Wi-Fi, Airplane Mode, and VPN

> **Personalization**: Change background images and colors

> **Accounts**: Settings for user accounts on this PC

> **Time & Language**: Region, speech, and time options

> **Ease of Access**: Tools for the vision or hearing impaired

> **Privacy**: Control what your computer knows about you

> **Update & Security**: Backup, restore, or update Windows

Traditional control panel menu can be accessed using methods shown in screenshots below:
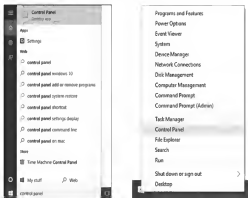

Figure15.2 Accessing Control Panel using Search and WinX menu

Figure 15.3: Accessing Control panel using Run command

Control panel can also be pinned to **Start Menu** or **Taskbar** by Right clicking on **Control Panel** option available in All Apps of **Start Menu**.

Figure 15.4: Category View of Control Panel

Various configuration options in Control Panel Menu are

➢ **System and Security**: Manage firewall, encryption, storage, and more

➢ **User Accounts**: Change system access permissions for users

➢ **Network and Internet**: Modify local network, internet or sharing options

➢ **Appearance and Personalization**: Tweak screen resolution and fonts

➢ **Hardware and Sound**: Device Manager and system sounds menu

➢ **Clock, Language & Region**: Add a second language or input method

➢ **Programs**: Manage desktop programs and default file handlers

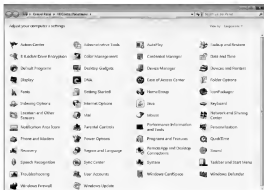➢ **Ease of Access**: Adjust visibility, audio options, and tooltips

Figure15.9: Large screen view of Control panel

The **Control Panel** is a part of the Microsoft Windows graphical user interface which allows users to view and manipulate basic system settings and controls via applets, such as adding hardware, adding and removing software, controlling user accounts, and changing accessibility options. Additional applets can be provided by third party software. In recent versions of Windows, the Control Panel has two views, **Classic View** and **Category View** and it is possible to switch between these through an option that appears on either the left side or top of the window. Many of the individual Control Panel applets can be accessed in other ways. For instance, **Display Properties** can be accessed by right-clicking on an empty area of the desktop and choosing **Properties**.

USEFUL TIP

There are overlapping between Control Panel and Settings Apps. When you are not exactly sure which menu you should use, just perform a quick search by typing brief description of setting you are looking for in Windows Start menu Search option

Chapter 15   Computer Administration

QUICK **REVIEW**

- What is the use of Control Panel?
- How can you access Control panel in Windows 10?
- How is control panel different from Settings App?

15.2 Working on Control Panel

The applets listed below are components of the Microsoft Windows control panel, which allows users to define a range of settings for their computer, monitor the status of devices such as printers and modems, and set up new hardware, programs and network connections.

15.2.1 System and Security

15.2.1.1 Security and Maintenance

It gives the user access to the inbuilt Windows security components, as well as providing information about any existing antivirus software such as McAfee or Quack Heal. It includes access to Windows Update, where users can specify whether the computer should check for updates regularly (also available through the Windows Update panel), and options for managing internet security settings. It also includes links to internet articles about PC security and current virus threats and notifies the user when the PC's security is compromised.

15.2.1.2 System

This is used to view and change core system settings, a user can for instance.

➢ Display general information on the user's machine such as the amount of RAM, CPU speed and type, the version of Windows the system is using and the manufacturer.

➢ Edit the computer name s network workgroup.

➢ Manage and Configure hardware devices, and view information such as the manufacturer, user access and driver version of my hardware device installed on the system via Device Manager.

➢ Enable/Disable system features such as automatic updates and System restore monitoring.

➢ Specify advanced features such as performance logs, virtual memory settings and roaming profiles.

Figure 15-6: Security & Maintenance

Figure 15-7: System Pane

15.2.1.3   Administrative Tools

It contains tools for system administration, including security, performance and service configuration. These are links to various configurations of the Microsoft Management Console such as the local services and the Event Viewer.
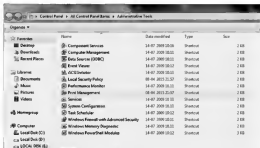

Figure 15-8: Administrative Tools

15.2.2   Network & Internet

Displays and allows the user to edit or create network connections such as Local Area Networks (LAN) and internet connections. It also offers troubleshooting functions in case the computer has to be reconnected to the network.

Figure 15-9: Network & Internet Pane

15.2.2.1 Internet Options

Allows the user to change the way the computer manages internet connections and browser settings for Internet Explorer, it has several tags specifying different attributes.

➤ **General** - This specifies the homepage and color schemes and allows the user to delete internet usage history.

➤ **Security & Privacy** - These specify whether the computer should allow websites to undertake certain processes and download cookies, this panel also gives access to the **inbuilt pop-up blocker** (Windows XP SP2 and later) and the phishing controls (Internet Explorer 7).

➤ **Content** - Allows the parental controls and auto complete to be configured and also specifies how to deal with certificates.

➤ **Connections, Programs and Advanced** - These give access to other aspects of internet settings such as the default modem connection and email client, proxy settings and other advanced configurations.

Figure 15.10: Internet Options

15.2.3 Hardware and Sound

Devices, Printers and Sound settings can be managed in this menu.

Figure 15.11: Hardwares & Sound

15.2.3.1 Power Options:

Includes options to manage energy consumption such as:

➤ Specify how long it takes to switch off the display and hard drives for how long it takes for the system to enter standby, if at all.

➤ To decide what to do when the computer's on/off button is pressed, such as whether to shut down or to enter standby.

➤ Whether to allow Hibernation (some systems become unstable when restarting).

➤ Allows the user to configure UPS (if available).

Figure 15-12 Power Options

15.2.4   Programs

This section allows the user to uninstall/repair software installed on the system in a number of ways.

➤ Allows users to uninstall and change existing software packages, as well as indicating how much space individual programs take and how frequently they are used.

➤ Allows users to manually install software from a CD-ROM or Floppy Disk, and install add

ons from Windows Update

➤ Allows users to change which Windows components are installed, via the Windows setup Wizard, which includes Internet Explorer, Windows Media Player and Windows Messenger.

Figure15.15 Programs and Features

15.2.5   User Accounts

This allows the user to configure their account and other accounts used in the system, should they have sufficient privileges. They can change their username and password, their picture (if enabled). If the current user has an administrator's account they can also add, delete and modify other user accounts as well as make changes to over system settings. This panel also specifies whether the guest account should be active and whether to use the Welcome screen while Windows loads.

15.2.6   Appearance & Personalization

Allows the user to change the display characteristics of their computer,

➤ Allows users to change the desktop background (wallpaper) to a picture of their choice and specifies how it should be shown

➤ Allows the user to change or disable the screensaver, and specify how long it takes to

activate and whether to ask for a password on resume

➤ Allows the user to specify the color styles of all elements within the system, primarily whether to use the Windows XP / Vista styles (blue by default in XP) or to use the chosen Windows 98 / Me styles, this also allows the user to change the My Computer and Recycle Bin icons

Figure 15.14: Display in Control Panel

➤ Allows the user to change the screen resolution and color quality, and provides trouble shooting advice for displays

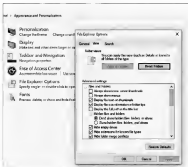## 15.2.6.1 File Explorer Options

Figure 15.15: Folder Options

This item allows for configuration of how folders and files are presented as Windows Explorer. More specifically it allows the user to specify general settings like whether folders open in a new window or the existing window and whether the common tasks pane is shown, as well as more advanced tasks such as whether windows should hide critical system files

and whether to show file extensions. It is also used to modify file type associations in Windows, i.e., which program opens what type of file and other settings like actions for each file type and the file extension.

15.2.6.2   Taskbar and Start Menu:

Allows the user to change the behavior and appearance of the task bar and Start Menu,

➢   Specifies whether to use Windows XP/Vista or Classic 9x/Me styles on the taskbar and start menu

➢   Whether the taskbar should Auto-Hide.

➢   Whether to show the clock in the notification area.

➢   Allows the user to manage the tray icons.

➢   Advanced options such as whether to show Printers & Faxes in the start menu and whether to display My Documents as menu or as a link to a new window

15.2.7   Clock, Region & Language Options

Allows user to change the date and time stored in the machine's BIOS, change the time zone, select language, change location and specify whether to synchronize the date and time with an Internet Time Server and which server to use.
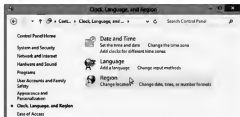

Figure 15.16: Clock, Language & Region

15.2.8   Ease of Access Center

This option allows users to configure the accessibility of their PC. It comprises various settings primarily aimed at differently abled users or hardware problems

Figure 15.17: Ease of Access Center

Using these settings:

➤ Narrator and Magnifier may be enabled.

➤ Onscreen keyboard and contrast setting may be changed.

➤ The behavior of the keyboard can be modified, this is aimed at people who have difficulty pressing key-combinations, or pressing a key just once. (Sticky Keys, Filter Keys and Toggle Keys)

➤ The pointer can be controlled using the keyboard (Mouse Keys)

QUICK REVIEW

- How can we use power options to save energy?
- Using which option can we uninstall software?

15.3   Software Installation

You are capable of doing a lot with the programs and features included in Windows 10, but may want to install other programs In Windows 10, typically programs are installed from a CD or

DVD, from the Internet, or from Windows Store. If you want to uninstall or make changes to a program already installed on your computer, you can do it through Control panel or Settings App.

15.3.1   To install from a CD or DVD

Insert the disc into your computer, and then follow the instructions on your screen. If you're prompted for an administrator password or confirmation, type the password or provide confirmation. Many programs installed from CDs or DVDs open an installation wizard for the program automatically. In these cases, the auto play dialog box appears and you can choose to run the wizard.

AutoPlay

DVD RW Drive (D:) for all media and devices

Choose AutoPlay defaults

Removable drive

Figure 15.18 AutoPlay Settings

If a program doesn't begin installation automatically, check the information that came with the program. This information will likely provide instructions for installing the program manually. If you can't access the information, you can also browse through the disc and open the program setup file, usually called Setup.exe or Install.exe.

If install doesn't start automatically, check your AutoPlay settings. In Search, enter Autoplay settings and select AutoPlay Settings. Make sure AutoPlay is on.

You can also choose default actions for removable drives and memory cards.

15.3.2   To install from Internet

You should download and install programs only from trusted publishers and retail websites.

1)   In your web browser select the link to the program

2)   Select Save or Save As to download the program

3)   Most antivirus programs like Windows Defender will scan the program for viruses during download

4)   To install the program immediately, click open or run, and then follow the instructions on your screen. If you're prompted for an administrator password or confirmation, type the password or provide confirmation.

5)   To install the program later, click Save, and then download the installation file to your computer. When you're ready to install the program, double-click the file, and then follow the instructions on your screen. This is a safer option because you can scan the installation

file for viruses before you proceed. The programs designed to work with Windows are usually very easy and methodical to install

15.3.3   To install from Windows Store

To install a program or application through windows store, go to Store using Store tile (which looks like a shopping bag) on Taskbar or Start Menu Search for required program and install.

15.3.4   Installation Process of a Program

The programs designed to work with Windows are usually very easy and methodical to install Take an example of VLC media player in installing as software

Figure.15.19: Setup extraction

Figure.15.20: Setup wizard of VLC media player

Figure.15.21: Language Selection during installation

Figure.15.22: License Agreement of VLC Media player

Figure 15.23 Specifying Location of Installation

Figure 15.24 Completing the Setup

USEFUL TIP

Some installers install additional programs and change your default setting. Don't forget to uncheck such programs during installation.

QUICK REVIEW

- What are different sources of installation in Windows 10?
- What is the need of installing program or software?
- Where is the installed program saved on Computer?

Chapter 15   Computer Administration

15.4   Managing Resources

You can manage resources using administrative tools. Administrative Tools is a folder in control panel that contains tools for system administrators and advanced users. The tools in the folder might vary depending on which version of windows you are using.

Open Administrative Tools by clicking the Start button Picture of the Start button, and then clicking Control Panel. In the search box, type administrative tools, and then click Administrative Tools.

Many of the tools in this folder, such as Computer Management, are Microsoft Management Console (MMC) snap-ins that includes their own help topics. To view specific help for an MMC tool, or to search for an MMC snap in that you don't see in the following list, open the tool, click the Help menu, and then click Help Topics.

Some common administrative tools in this folder include:

Component Services. Configure and administer Component Object Model (COM) components Component Services is designed for use by developers and administrators

Computer Management
Manage local or remote computers by using a single, consolidated desktop tool. Using Computer Management, you can perform many tasks, such as monitoring system events, configuring hard disks, and managing system performance.

Figure15.23: Computer Management Interface

15.5   Creating User Accounts

Windows 10 allows you to create multiple user accounts, so that each user can have a separate user account with unique settings and preferences, such as a desktop background or screen saver User

accounts control which files and programs users can access and what types of changes users can make to the computer.

You can have a single account on your computer that everyone could use. But having multiple accounts has some advantages. If each user has his or her own account, then each person will have his or her own desktop for organizing files and folders. Each person also will be able to choose a specific desktop background, along with other personalization features. In addition, parents will be able to set Parental Controls for each child's account.

Before you start making new user accounts, it's important to understand the two types of accounts.

➢ **Standard:** Standard accounts are the basic accounts used for normal, everyday tasks. As a Standard user, you can do just about anything you would need to do, such as running software or personalizing your desktop. Also, Parental Controls can be placed on Standard accounts.

➢ **Administrator:** Administrator accounts are special accounts that are used for making certain changes to system settings or managing other people's accounts. They have full access to every setting on the computer. Every computer will have at least one Administrator account.

To go to your user accounts:

1. Go to Control Panel

2. Click "Change Account Type"

OR

1. Go to the Settings App

2. Click "Accounts"

The **Accounts** pane will appear. You will see all of the user accounts here, and you can add more accounts or manage existing ones using various links available. Click on Family and Other users for adding new user accounts.

Figure 15-26: Managing multiple accounts

To create a new account:

1. From the **Accounts** pane, click **Family & Other Users**

2. Select Add someone else to this PC

3. At the bottom of the page, select I don't have this person's sign-in information

4. At the bottom of the next page, select Add a user without a Microsoft account

5. Enter a name for the new account. If you want this person to sign in with a password, enter and verify the password, add a password hint, then select Next

6. Select Finish

Once you've created a new account, you may want to add a password or make other changes to the account's settings using Setting App Similarly picture, sign-in options etc. can also be changed for the account.
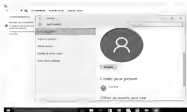

Figure 15 27 Changing Picture for Account

QUICK REVIEW

➤ How is Administrator User account different from Standard
➤ How can one change password for the user account?
➤ How can one add new user account for guest?

15.6 Working on Firewall

A firewall can help prevent hackers or malicious software (such as worms) from gaining access to your computer through a network or the Internet. A firewall can also help stop your computer from sending malicious software to other computers.

Firewall is a device that filters packets either coming into or going out of a device. Filtering can be based on IP, TCP, UDP and other criteria relating to a packet as well as authentication.

Firewalls have several types like Packet filtering, Stateful, Proxy.

1) **Packet filtering** makes each filtering decision on a packet by packet basis without regard to

previous packets in any direction.

2) **Stateful firewall** keeps track of packet flows and filters based on flow information.

3) **Proxy firewall** works on a per application basis. User sends to proxy, proxy creates new packet sourced from proxy

Firewall can be Network-based or host-based. Network-based runs a router, multi-layer switch or dedicated firewall. Host based firewall runs on computer running OS such as Windows 10 or UNIX. Network or host can be Hardware or software firewall. Hardware firewall chassis designed for specifically to operate as a firewall, highest performance

You can customize firewall settings for each type of network location in Windows Firewall. To find these settings, follow these steps

- Open Windows Firewall by clicking the Start button and then clicking Control Panel. In the search box, type firewall, and then click Windows Firewall.

- In the left pane, click Turn Windows Firewall on or off. If you're prompted for an administrator password or confirmation, type the password or provide confirmation

    o Note If your PC is connected to a network, network policy settings might prevent you from completing these steps.

Figure15 20; Windows Firewall

Turn on Windows Firewall

This setting is selected by default. When Windows Firewall is on, most programs are blocked from communicating through the firewall. If you want to allow a program to communicate through the firewall, you can add it to the list of allowed programs.

Figure 15.29 Customize settings for each network

Turning off Windows Firewall

You shouldn't turn off Windows Firewall unless you have another firewall turned on. Turning off Windows Firewall might make your computer (and your network, if you have one) more vulnerable to damage from hackers and malicious software.

You can modify the firewall settings for each type of network location.

You can change the advanced settings of windows firewall by using Windows Firewall with Advanced Security app from search menu.

Figure15.30 Properties of Windows Firewall

QUICK REVIEW

▶ What is the function of a firewall?

▶ How to allow some programs as exceptions to Windows firewall?

▶ How does a firewall work?

Multiple Choice Questions

1. In a Computer, if the displayed system time and date is incorrect, you can reset it using.

   a. Taskview

   b. Calendar

   c. Start Button

   d. Settings/Control panel

2. In Windows 10, a software cannot be installed:

   a. Directly from internet

   b. From Windows store

   c. From CD/DVD/Pen drive

   d. Using word file

3. Which of the following is not an administrative tool available in Windows 10?

   a. ODBC

   b. Disk Cleanup

   c. Windows firewall with advanced security

   d. Cortana

4. A proxy firewall filters at the

   a. physical layer

   b. application layer

   c. data link layer

   d. network layer

5. Printer can be installed on a computer using which of the following control panel/settings options?

   a. Control Panel=>Hardware & Sound=>Devices and Printers=>Add a printer

   b. Settings=>Devices=>Printers & Scanners=>Add a printer or scanner

   c. Both a and b

   d. None of the above

6. A utility that can be used to minimize the number of fragmented files and improve the access speed:

   a. Disk space

   b. Defragmenter

   c. Double space

   d. Double space

7. Ease of Access center allows you to configure

   a. Narrator and Magnifier

   b. Mouse Keys

   c. Onscreen Keyboard and contrast settings

   d. All of above

8. Which of the following is not a type of Firewall?

   a. Proxy firewall

   b. Stateful firewall

   c. Stone Firewall

   d. Packet Filtering firewall

Multiple Choice Questions

9. Which of the following is true in reference of a device driver

a. A program that controls a particular type of device that is attached to your computer

b. Provides a hardware interface to devices

c. It is required for all kind of installations in operating system

d. All of the above

10. Which of the settings can be configured using control panel or settings app in windows 10?

a. Appearance and Personalization (Desktop background, screensaver, theme etc.)

b. Network and Internet

c. Clock, Region and Language

d. All of the above